

REMARKS

This paper is submitted in response to the Office Action dated December 14, 2001. In response thereto, the present application has been amended in a manner that is believed to place it into condition for allowance. Accordingly, reconsideration and withdrawal of the outstanding Office Action and issuance of a Notice of Allowance are respectfully requested.

Claims 3 and 4 are pending in the application. In the Office Action, the Examiner has rejected Claims 3 and 4 under 35 U.S.C. § 103(a) as being obvious over JP-04158997 (JP '997) in view of JP-04158998 (JP '998).

The rejections of Claims 3 and 4 are respectfully traversed. Claims 3 and 4 have been amended to further define the cross position as being "protruded" and "rounded," support for these limitations being found in Figs. 1B, 5 and 8. Based on these limitations, the ejection characteristics of the chips are improved because the chips curled with small-diameters along the curved face 21 are smoothly transferred from the curved face 21 to the gullet 15 of the saw blade 1 such that the curled chips are slid on the rounded cross position 25 (described in the original specification on page 8, lines 20-25 and page 9, lines 21-25).

In contrast, the cross positions in the cited references, JP '997 and JP '998, do not appear to be rounded. Therefore, the generated curled chips would not smoothly transfer from the curved faces to the gullet portions of the saw blades even though the generated curled chips are curled with small-diameters. Reconsideration and withdrawal of the §103 rejection are respectfully requested.

As all grounds of objection and rejection have been addressed and overcome, entry of this Amendment and issuance of a Notice of Allowance of Claims 3 and 4, as now presented, are respectfully solicited.

In the event there are any questions relating to this Amendment or to the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that the prosecution of this application may be expedited.

Please charge any shortage or credit any overpayment of fees to Deposit Account No. 23-2185 (000004.00659). In the event that a petition for an extension of time is required to be submitted herewith and in the event that a separate petition does not accompany this response, Applicant hereby petitions under 37 CFR 1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized above.

Respectfully Submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

--3. (Twice Amended) A saw blade, comprising:

an unset tooth;

a left set tooth;

a right set tooth;

wherein the left set tooth and the right set tooth are set to a right-and-left direction;

wherein when a thickness of a body section of the saw blade is D , and a set width is T , and where α is a setting coefficient, a relationship that $T = D + 2\alpha$ is established;

wherein a relationship between the thickness D of the body section and the coefficient α is established in a manner such that

when $0.85 \text{ mm} \leq D \leq 0.95 \text{ mm}$, $0.15 \text{ mm} \leq \alpha \leq 0.35 \text{ mm}$ is established;

when $0.96 \text{ mm} < D \leq 1.2 \text{ mm}$, $0.2 \text{ mm} \leq \alpha \leq 0.4 \text{ mm}$ is established;

when $1.2 \text{ mm} < D \leq 1.5 \text{ mm}$, $0.25 \text{ mm} \leq \alpha \leq 0.43 \text{ mm}$ is established;

when $1.5 \text{ mm} < D \leq 1.7 \text{ mm}$, $0.3 \text{ mm} \leq \alpha \leq 0.5 \text{ mm}$ is established; or

when $1.7 \text{ mm} < D$, $0.35 \text{ mm} \leq \alpha \leq 0.6 \text{ mm}$ is established;

wherein a small-diameter curl forming section for small curling chips generated at the time of cutting a workpiece is provided at a tip portion of saw teeth;

wherein the small-diameter curl forming section has a plane rake face, which extends by a predetermined length from the point of the saw tooth to a direction of a gullet bottom section of the saw blade, and a curved face which is continuous to the rake face;

wherein in the case where a vertical line is drawn from a cross position between

the curved face and a gullet forming curved face forming the gullet section towards a direction of the cutting by means of the saw teeth, when a dimension from the vertical line to the point of the saw tooth is A and when a radius of the curved face is R, a relationship that $R/2 < A \leq 2R$ is established; [and

wherein a small-diameter curl forming section for small curling chips generated at the time of cutting a workpiece is provided at a tip portion of the saw teeth]

wherein the cross position between the curved face and the gullet forming curved face is protruded from the curved face and the gullet forming curved face; and

wherein the cross position is rounded.--

the curved face and a gullet forming curved face forming the gullet section towards a direction of the cutting by means of the saw teeth, when a dimension from the vertical line to the point of the saw tooth is A and when a radius of the curved face is R, a relationship that $R/2 < A \leq 2R$ is established; [and

wherein a small-diameter curl forming section for small curling chips generated at the time of cutting a workpiece is provided at a tip portion of the saw teeth]

wherein the cross position between the curved face and the gullet forming curved face is protruded from the curved face and the gullet forming curved face; and

wherein the cross position is rounded.--